A case study of student learning spaces during the pandemic; a sociomateriality perspective

GRIFFITHS, Teri-Lisa <http://orcid.org/0000-0002-5756-6596>, DICKINSON, Jill <http://orcid.org/0000-0003-1471-869X> and FLETCHER, Anna

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A Case Study of Student Learning Spaces During the Pandemic:
A sociomateriality perspective

Teri-Lisa Griffiths, Jill Dickinson, and Anna Fletcher, Sheffield Hallam University

ABSTRACT

Against the backdrop of a dynamic Higher Education ('HE') environment and challenges compounded by the Covid-19 pandemic, this 'on the horizon' paper will outline initial findings from a case study, focused on a large, post-1992, UK-based, Higher Education Institution ('HEI') in the North of England, with the aim to explore students' perceptions of their transitions to a blended learning environment. This paper examines two research questions. First, what can be learned about students' perceptions regarding the approaches taken by the HEI to support the imposed changes to their learning? Second, with a particular focus on learning spaces, how do students perceive their early experiences of the changes necessitated by the pandemic? Utilising the theoretical framework of sociomateriality, the paper will offer a reflective voice on the experiences arising from adapting residential dwellings into learning spaces. The variation in students' living situations will be considered in the context of access to HE and student experience. The study draws on creative, photovoice methods to facilitate participant-led discussions in both focus groups and interviews. Illustrative images produced by participants are included in this paper to add context to the initial analysis. Finally, future directions for the study will be outlined and considered in the context of ongoing changes in the HE sector.

Keywords: Sociomateriality, learning spaces, photovoice method, blended learning, student experience

Sociomateriality in education

The Covid-19 pandemic has necessitated increased reliance on technology in higher education (HE). Pre-pandemic, the impact of technology was evident in various ways, such as the use of virtual learning environments (VLEs) (Koskela, Kiltti, Vilpola, & Tervonen, 2005), and the expansion of distance learning options at 'traditional' universities (Adekola, Dale, Gardiner, & Fischbacher-Smith, 2017). Although the impact of distance learning on students has been explored before (Adekola et al., 2017; Bayne, Gallagher, & Lamb, 2014), the speed and imposed nature of Covid-19 related change presents a unique opportunity to further understand the role of technology within educational learning spaces. Specifically, the researchers explore how the changed nature of learning spaces has impacted on the student experience.

Previous research on learning spaces in HE has taken a 'common sense approach'; imagining spaces as fixed, rather than adaptable, as well as separate from, and imposing on, human behaviour and interaction (Acton, 2017). Orlikowski & Scott (2008) proposed that sociomateriality, the inherent inseparability between the technical and the social, challenged this assumption and should be explored in future research. Acton (2017) posits that sociomateriality has a basis in sociological analysis of public spaces as segregated environments and mechanisms for control, and the behaviours within them as manifestations of internalised spatial understandings. To illustrate internalised spatial understanding within HE, consider the lecture theatre. Even new students usually know to file in once the previous lecture has finished, take a seat, and wait for the lecturer to begin from the lectern. They also typically wait until they are invited to leave. This behaviour is confirmed and reinforced by their peers and the lecturer. Sociomateriality can help identify connections between the meaning ascribed to objects through human agency within an educational setting and, in the current context, how these connections are formed. In this way, material aspects of spaces are both tools for completing tasks and reinforcing identities (Acton, 2017).

When considering learning spaces and their impact on pedagogic practices, there is an assumption that space that has been specifically designed for teaching and learning will result in changed practice. However, Mulcahy, Cleveland, and Aberton (2015) found no causal link between learning spaces and pedagogic change. Their findings demonstrated that pedagogic changes are influenced by a variety of factors, not just the physical space. It is suggested that research should follow a relational, sociomaterial perspective to understand specific encounters, such as remote teaching and learning (Mulcahy et al., 2015). Taking such an approach, Gourlay (2021) rejects the notion of 'virtual learning' as the opposite of in-person learning due to the inherently embodied nature of distance learning. Technology still requires human manipulation and adjustment, and online teaching requires teachers to 'perform' their professional identities (Gourlay, 2021).

Fenwick (2015) highlights how sociomaterial perspectives can support methods that examine the power dynamics inherent in educational settings. Remote delivery presents opportunities and challenges for students traditionally excluded from HE. While

students are free from the imposing, and potentially oppressive, cultural capital inherent in higher education institution (HEI) spaces that continue to be dominated by white, middle-class, and able-bodied perspectives (O'Connor & Robinson, 1999; Reay, Davies, David, & Ball, 2001), they may still be restricted by practical issues; for example, multiple occupancy households, work or caring commitments, lack of suitable learning space, poor or no wi-fi, and lack of IT equipment.

This study aims to develop a deeper understanding of the changing nature of learning spaces due to the pandemic. It adopts the following research questions to explore students' workspaces at home and their learning experience:

1. What can be learned about HE students' perceptions regarding the approaches taken by their institution to support the imposed changes to their learning?

2. Focusing on learning spaces, how do HE students perceive their early experiences of the changes necessitated by the pandemic?

To answer these questions, it draws on the theoretical framework of sociomateriality to develop a holistic understanding around the "inseparable mélange of people, place, technologies, interaction, discourse, feeling, value and power" that constitutes students' learning experiences both on-campus and online (Acton, 2017, p. 1441) within this unique pandemic environment.

Method

The researchers adopted a case study approach to examine 'real-life' issues, facilitate "detailed contextual analysis" (Grauer, 2012, p. 70), and recognise their "insiderness" as teaching staff and/or researchers within HE (Lucas, Fleming, & Bhosale, 2018, p. 220). The research focused on a large, post-1992, UK-based HEI in the North of England where requirements to engage with online learning presented particular challenges given the HEI's promises of real-world opportunities and industry-relevant work experience.

The researchers recruited participants through various channels, including the student union and social media; inviting students from all levels, across all courses, to take part. They adopted self-selection sampling to foster commitment to this longitudinal study, and snowball sampling by inviting participants to encourage peer-involvement (Sharma, 2017). Data were collected from 18 participants, who were studying at either undergraduate or postgraduate level across a range of disciplines. Keen to develop an understanding of perceptions over time, the researchers identified contextually appropriate time intervals (Wang, Beal, Chan, Newman, Vancouver, & Vandenberg, 2017), collecting data at the start of the academic year (time 1) and towards the beginning of the second semester (time 2). Six students participated at time 1, and 12 students participated at time 2. Reflecting the increased potential for attrition within longitudinal research (Cleary and Balmer, 2015), only three participants provided responses at both data collection points.

The researchers used focus groups because of their 'heuristic value' (Acocella, 2011), long-standing acceptance (Flores and Alonso, 1995), and the opportunities presented for isolated students to build connectedness through sharing experiences. Participants attended either focus groups or interviews depending on availability (Baillie, 2019). The researchers conducted five focus groups and nine interviews. Given the restrictions necessitated by Covid-19, the researchers conducted focus groups over Zoom.

Adopting photovoice to "increase empowerment and participation" (Warne, Snyder, & Gadin, 2012, p. 299), the researchers asked participants to submit a photograph of their current learning space (Figure 1) to stimulate discussions around their learning home working spaces and their learning experiences. The researchers followed Nowell, Norris, White, & Moules' (2017) process for data analysis, and recognised data saturation when no novel information was being generated (Saunders, Sim, Kingston, Baker, Waterfield, Bartlam, Burroughs, & Kinks, 2018).

The researchers obtained prior ethical approval from the HEI's Ethics Committee.

Figure 1 Examples of photographs illustrating participants' working spaces.
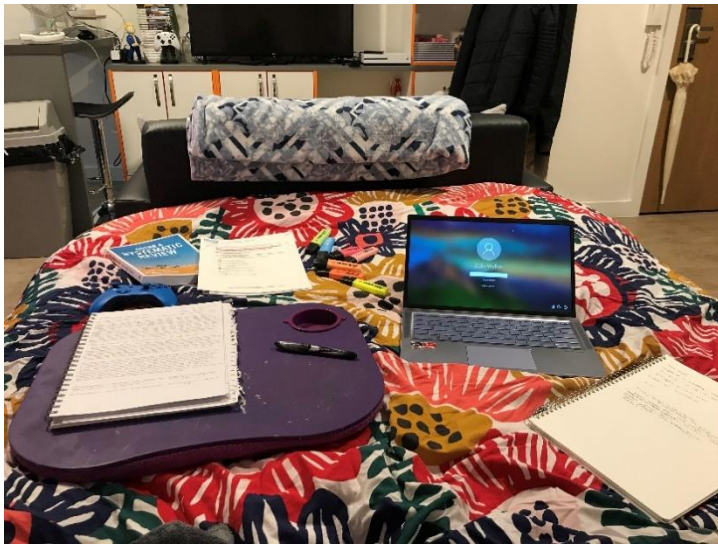
Emerging findings

From their initial analysis of the data, the researchers identified an overarching theme of 'space'. Echoing the findings of Gourlay (2021), participants reported multi-purposing and adapting their homes to meet their online learning needs. Many recounted spending long hours in one specific learning space. Some purposefully selected spaces were based on comfort factors, such as noise, light, mood, seating, desk space, and technology.

> Stools are the most impractical things to spend all day working on…So the bed is the easiest place for me to be and feel comfortable.

> Because there's the table behind me, and I was like, no, that's not near enough to the window. I need to be [near] light and not just like my artificial computer light for six, seven, eight hours.

The findings lend support to the concept that remote learning does not liberate students from the segregation inherent in social spaces (Acton, 2017). Student experience is directly impacted by their home situation in ways that are not relevant on campus. For example, some participants were forced to multi-purpose existing living areas for their learning (including, for example, beds, dining tables, and kitchens) resulting in a blurring of boundaries between work and home.

> I just need that transition from a rest space to a workspace. And I don't have that.

> I like to try and have some kind of distinction between work and home, which is very difficult when they're both in your home.

These findings echo Gourlay's (2021) notion that 'virtual' learning does not constitute freedom from the physical barriers and constraints of on-campus teaching; actually, blended learning creates alternative barriers. It could be argued that socioeconomic differences are more apparent in remote spaces, as students lose the levelling influence of campus learning, where everyone has access to similar spatial resources. The example of working in bed is quite striking as repurposing a place typically reserved for rest may present issues with how students may conceptualise their learning experiences and how they may be perceived by others in terms of their attitudes to their studies. In addition to physical, spatial factors, these environments also implicated wellbeing with some participants reporting how being forced to learn from home increased loneliness and disconnectedness ("it's very, very difficult to connect with people."). Such evidence of isolation reflects recent reports commissioned by the Office for Students (Barber, 2021) and Jisc (Killen and Langer-Crame, 2020).

Some participants reported increased anxiety about their academic progress without opportunities to engage with informal and structured learning activities. There was some negativity around online alternatives to in-class discussion, such as breakout rooms, because of low interaction without tutor supervision (Moniz, 2017). Several participants also mentioned that they missed informal discussions with tutors.

> …the nervous side of it comes from. Not being able to confirm things with a lecturer the way I would if I was in person. I could just collar them, and just say are you alright for two minutes before you rush off […] I can just confirm this with you.

Remote learning may be establishing new barriers for students, who perceive physical isolation from campus as having a negative impact on their student experience and may constitute a disparity in the development of online pedagogy if alternatives to informal engagement are not considered (Mulcahy et al., 2015). Participants were nostalgic for on-campus experiences because they mattered to student identity, supporting the notion that objects are connected to human interaction and identity formation (Acton, 2017).

> I'm really missing what I had. And I think you take it for granted. Alright you whinge like 'ah, I've got a nine a.m. [timetabled activity]', but I think I miss going in for a nine a.m. [laughter].

> Before you come to uni you're sold the idea that you're gonna come and you're gonna be in these grand buildings and lecture halls and you're going to feel like a student.

This illustrates the importance that students may attach to specific learning spaces and how such 'sociomaterial entanglements' can reinforce their student identities and sense of belonging to a learning community (Acton, 2017, 1449).

Next steps

The initial findings demonstrate students' perception that blended learning is subordinate to on-campus activities in terms of the student experience. Although remote study may confer benefits for some students, there are clear wellbeing implications arising from online delivery when students are unable to separate their work and living spaces effectively. The researchers witnessed a divide between participants with dedicated learning spaces and those who were forced to repurpose their living areas. Drawing on the initial findings to support the development of broader understanding, the authors make recommendations for HEIs to encourage the adoption of a more holistic approach to learning spaces to meet key stakeholder needs. These include encouraging students to use technology to expand the range of spaces where their learning can take place, such as on-campus bookable spaces. This could provide an alternative for students who are unable to separate work and living spaces effectively and support student wellbeing more generally. With the aim of reducing loneliness and feelings of disconnection among students isolated at home, HEIs could also explore the development of informal, online spaces to help foster social interaction and develop a stronger sense of the student community within the extended campus environment. Finally, as the students involved in the research expressed the benefits of sharing their own perceptions of learning spaces and hearing about others' experiences, HEIs could respond by generating other opportunities for inspiring students to adopt a broader approach to their own learning spaces. The researchers will present the overall findings in a full paper that explores the issues related to HEIs adopting a blended learning approach in the future and identifies specific recommendations for related strategies.

Biographies

Teri-Lisa Griffiths BA (Hons) QCG MA FHEA is a Senior Lecturer in Criminology. Her teaching is focused on the development of student employability and academic skills, working with external partners to provide relevant and high-quality experiences for students. Her research interests are centered on the student experience and professional development.

Jill Dickinson LLB (Hons) PGCE LLM SFHEA PhD RPA is a Senior Lecturer in Law. Jill's research encompasses aspects of place and space, and professional development. Through her role as Senior Fellow, Jill sat on the review panel for the Advance HE Global Teaching Excellence Awards

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Anna Fletcher BSc is a Graduate Intern working within the Student Experience, Teaching and Learning directorate. She works closely with the Digital team and the Student communications team. Anna recently graduated from Sheffield Hallam University with a 1st class degree in Psychology, where she developed research skills in data analysis and evaluation.

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